Author Index

Aragon, E.L., *see* De Datta, S.K. et al.
Bennet, J.M., Mutti, L.S.M., Rao, P.S.C. and Jones, J.W. (Gainesville, FL, U.S.A.)
Interactive effects of nitrogen and water stresses on biomass accumulation, nitrogen uptake, and seed yield of maize 297
Boonyawivatana, S., *see* Puckridge, D.W. et al.
Boote, K.J., *see* Mislevy, P. et al.
Catling, H.D., *see* Puckridge, D.W. et al.
Correll, R.L., *see* Heritage, A.D. et al.
Cothren, J.T., *see* Guthrie, D.S. and Cothren, J.T.
D'Souza, E.J., *see* Floyd, C.N. et al.
De Datta, S.K., Malabuyoc, J.A. and Aragon, E.L. (Manila, The Philippines)
A field screening technique for evaluating rice germplasm for drought tolerance during the vegetative stage 123
Demagante, A.L. and Vander Zaag, P. (Manila, The Philippines)
Potato (*Solanum* spp.) in an isohyperthermic environment. II. Response to planting date 153
Demagante, A.L., *see also* Vander Zaag, P. and Demagante, A.L.
Duncan, R.R., *see* Gerik, T.J. et al.
Ecochard, R., *see* Pascal, M.F. et al.
Ferreira, S.A., *see* Heinz, D.J. and Ferreira, S.A.
Floyd, C.N., Lefroy, R.D.B. and D'Souza, E.A. (Mendi, Papua New Guinea)
Soil fertility and sweet potato production on volcanic ash soils in the highlands of Papua New Guinea 1
Fukai, S., *see* Tsay, J.S. et al.
Gardner, F.P. (Gainesville, FL. U.S.A.)
Book review of *Plant Analysis as a Guide to the Nutrient Requirement of Temperate and Tropical Crops*, by P. Martin-Pre'vel, J. Gagnard and P. Gautier 76
Gerik, T.J., Rosenthal, W.D. (Temple, TX, U.S.A.) and Duncan, R.R. (Griffin, GA, U.S.A.)
Simulating grain yield and plant development of ratoon grain sorghum over diverse environments 63
Gibbons, R.W., *see* Rattunde, H.F. et al.
Graham, P.H., *see* Vargas, A.A.T. and Graham, P.H.
Green, C.F. (Loughborough, Great Britain)
Genotypic differences in the growth of *Triticum aestivum* in relation to absorbed solar radiation 285
Guthrie, D.S. (Raleigh, NC, U.S.A.) and Cothren, J.T. (College Station, TX, U.S.A.)
Enhanced ethylene evolution and electrolyte leakage from methomyl-treated cotton (*Gossypium hirsutum*) 241
Heinz, D.J. and Ferreira, S.A. (Aiea, HI, U.S.A.)
Book review of *Diseases of Sugarcane. Major Diseases*, by B.C. Ricaud, B.T. Egan, A.G. Gillaspie, Jr. and G.C. Hughes (Editors) 77
Heritage, A.D., Stapper, M., Smith, R.C.G. (Griffith, N.S.W., Australia) and Correll, R.L. (Glen Osmond, S.A., Australia)
Model of stripe rust infection and control on irrigated wheat in the Murrumbidgee irrigation areas of New South Wales 51

Hicks, S.K., *see* Peng, S. et al.
Igwilo, N. and Okoli, O.O. (Umudike, Nigeria)
Evaluation of yam cultivars for seed yam production, using the minisett technique 81
Imrie, B.C. (St. Lucia, Qld., Australia)
Book review of *Plant Breeding Reviews*, by J. Janick (Editor) 315
Jones, J.W., *see* Bennett, J.M. et al.
Khan, R., *see* Morrison, I.N. et al.
Kirby, E.J.M. (Nedlands, W.A., Australia)
Book review of *Simulation of Water Use, Nitrogen Nutrition and Growth of a Spring Wheat Crop*, by H. van Keulen and N.G. Seligman 313
Klepper, B. (Pendleton, OR, U.S.A.)
Book review of *The Effects of Low Temperature on Seedling Growth of Maize Genotypes* 317
Krieg, D.R., *see* Peng, S. et al.
Lefroy, R.D.B., *see* Floyd, C.N. et al.
Malabuyoc, J.A., *see* De Datta, S.K. et al.
Martin, F.G., *see* Mislevy, P. et al.
Mehta, H., *see* Sharma, S.K. and Mehta, H.
Midmore, D.J. (Lima, Peru)
Potato (*Solanum* spp.) in the hot tropics. VI. Plant population effects on soil temperature, plant development and tuber yield 183
Mislevy, P. (Ona, FL, U.S.A.), Boote, K.J. and Martin, F.G. (Gainesville, FL, U.S.A.)
Soybean response to gibberellic acid. I. Time of application relative to emergence 113
Morrison, I.N., Khan, R. and Rashid, A. (Islamabad, Pakistan)
Effects of seeding methods and soil crusting on establishment of rapeseed (*Brassica napus*) and mustard (*B. juncea*) 27
Mutti, L.S.M., *see* Bennett, J.M. et al.
Niyomwit, L., *see* Puckridge, D.W. et al.
Okoli, O.O., *see* Igwilo, N. and Okoli, O.O.
Olasantan, F.O. (Ila-Orangun, Nigeria)
Intercropping of cassava (*Manihot esculenta*) with maize or cowpea under different row arrangements 41
Pascal, M.F., Ecochard, R. and Planchon, C. (Toulouse, France)
Morphological and physiological selection criteria in barley (*Hordeum vulgare*) using estimates of heritability, correlations and selection response 135
Peng, S., Krieg, D.R. and Hicks, S.K. (Lubbock, TX, U.S.A.)
Cotton lint yield response to accumulated heat units and soil water supply 253
Planchon, C., *see* Pascal, M.F. et al.
Puckridge, D.W. (Bangkok, Thailand), Catling, H.D. (Manila, The Philippines), Vongsaroj, P., Boonyawivatana, S., Niyomwit, L. and Thongbai, P. (Bangkok, Thailand)
Factors affecting deepwater rice in the central plain of Thailand 263
Ramraj, V.M., *see* Rattunde, H.F. et al.
Rao, P.S.C., *see* Bennett, J.M. et al.
Rashid, A., *see* Morrison, I.N. et al.
Rattunde, H.F. (Ames, IA, U.S.A.), Ramraj, V.M., Williams, J.H. (Patancheru, India) and Gibbons, R.W. (Niamey, Niger)
Cultivar mixtures: a means of exploiting morpho-developmental differences among cultivated groundnuts 201
Rosenthal, W.D., see Gerik, T.J. et al.

Subject Index

Acidity, *see* Soil conditions
Analytical methods
  Crop nutrition (book review) 76
  Genetic variability and component analysis in soybean, effect of cropping system on 103
  Morphological and physiological selection in *Hordeum* using heritability, correlations and selection response 135
Arachis spp.
  Cultivar mixtures: a means of exploiting morpho-developmental differences among groundnuts 201
Barley, *see Hordeum* spp.
Bean, *see Phaseolus* spp.
Brassica spp.
  Seeding methods and soil crusting, effects on rapeseed and mustard 27
Breeding
  Plant breeding reviews (book review) 315
Cassava, *see Manihot* spp.
Cereals, general
  Plant breeding reviews (book review) 315
Cotton, *see Gossypium* spp.
Dioscorea spp.
  Evaluation of seed yam production, using minisett technique 81
Drought, *see* Water regime, effects of
Electrolyte dynamics
  Ethylene evolution and electrolyte leakage from methomyl-treated cotton 241
Environmental conditions, effects of
  Accumulated heat units and soil water, cotton yield response 253
  Maize at low temperatures (book review) 317
  Potato in the hot tropics. VI. Population effects on soil temperature development and yield 183
  Potato in an isohyperthermic environment.
    II. Response to planting date 153
    III. Evaluation of clones 167
  Sorghum, simulating yield and development 63
  Triticum in relation to absorbed solar radiation 285
Ethylene, *see* Growth regulators
Fertility, *see* Soil conditions
Fertilizers, *see* Nutrient dynamics
Gibberellin, *see* Growth regulators
Glycine spp.
  Cropping system, effect on genetic variability and component analysis in soybean 103
  Intercropping cassava with soybean of various maturities 211
  Sowing time, effects on growth and yield in cassava/soybean intercropping 227
  Soybean response to gibberellic acid. I. Time of application relative to emergence 113
  Tropical and subtropical soybean (book review) 75
Gossypium spp.
  Methomyl-treated cotton, ethylene evolution and electrolyte leakage 241
  Yield response to accumulated heat units and soil water 253

Groundnut, *see Arachis* spp.
Growth regulators
Deepwater rice, factors affecting 263
Ethylene evolution and electrolyte leakage from methomyl-treated cotton 241
Gibberellic acid and soybean response. I. Time of application relative to emergence 113
Heat units, *see* Environmental conditions, effects of
Herbicides, *see* Growth regulators
Hordeum spp.
Morphological and physiological selection in barley using heritability, correlations and selection response 135
Intercropping
Cassava, intercropping with soybean of varying maturities 211
Cassava, intercropping with maize or cowpea 41
Cassava/soybean intercropping, effects of sowing time on growth and yield 227
Cropping system, effect on genetic variability and component analysis in soybean 103
Groundnut cultivar mixtures: a means of exploiting morpho-developmental differences .. 201
Irrigation, *see* Water regime, effects of
Maize, *see Zea* spp.
Manihot spp.
Cassava/soybean intercropping, effects of sowing time growth and yield in 227
Intercropping with maize or cowpea 41
Intercropping with soybean 211
Minisett technique
Evaluation of seed yam production using minisett technique 81
Modelling
Sorghum, yield and development 63
Stripe rust infection and control on irrigated wheat 51
Water, nitrogen and wheat growth (book review) 313
Mustard, *see Brassica* spp.
Nutrient dynamics
Crop nutrition (book review) 76
Factors affecting deepwater rice 263
Growth and yield in cassava/soybean intercropping, effects of sowing time 227
Interaction of nitrogen and water stresses on biomass accumulation, nitrogen uptake, and seed yield of maize 297
Soil fertility and sweet potato production on volcanic ash soils 1
Water, nitrogen and wheat growth (book review) 313
Oryza spp.
Deepwater rice, factors affecting 263
Drought tolerance, screening technique for evaluating 123
Peanut, *see Arachis* spp.
Pests, weeds and diseases
Diseases of sugarcane (book review) 77
Stripe rust infection and control on irrigated wheat - modelling 51
Phaseolus spp.
Phaseolus vulgaris cultivar and *Rhizobium* strain variation in acid-pH tolerance and nodulation 91
Planting methods and timing
Intercropping cassava with maize or cowpea 41

Minisett technique evaluation of seed yam production 81
Potato in the hot tropics. VI. Population effects on soil temperature development and yield 183
Potato in an isohyperthermic environment. II. Response to planting date 153
Seeding methods and soil crusting, effects on *Brassica* 27
Sowing time, effects on growth and yield in cassava/soybean intercropping 227
Potato, *see Solanum* spp.
Puccinia spp. *see* Pests, weeds and diseases
Radiation-use efficiency
Cassava, intercropping with soybean of varying maturities 211
Cassava/soybean intercropping, effects of sowing time on growth and yield 227
Potato in the hot tropics. IV. Population effects on soil temperature development and yield 182
Potato in an isohyperthermic environment.
II. Response to planting date. 153
III. Evaluation of clones 167
Triticum genotypic differences in relation to absorbed solar radiation 285
Rapeseed, *see Brassica* spp.
Ratoon cropping
Simulating yield and development of sorghum 63
Rice, *see Oryza* spp.
Rusts, *see* Pests, weeds and diseases
Saccharum spp.
Diseases of sugarcane (book review) 77
Soil conditions
Phaseolus vulgaris cultivar and *Rhizobium* strain variation in acid-pH tolerance and nodulation 91
Soil crusting and seeding methods, effects on *Brassica* 27
Soil fertility and sweet potato production on volcanic ash soils 1
Solanum spp.
Potato in the hot tropics. VI. Population effects on soil temperature development and yield 183
Potato in an isohyperthermic environment
II. Response to planting date. 153
III. Evaluation of clones 167
Sorghum spp.
Simulating yield and development of sorghum 63
Soybean, *see Glycine* spp.
Structure and function, organism
Crop nutrition (book review) 76
Sugarcane, *see Saccharum* spp.
Sweet potato, *see Ipomoea* spp.
Triticum spp.
Genotypic differences in *Triticum* in relation to absorbed solar radiation 285
Stripe rust infection and control on irrigated wheat – a model 51
Water, nitrogen and wheat growth (book review) 313
Variety trials
Deepwater rice, factors affecting 263
Groundnut cultivar mixtures: a means of exploiting morpho-developmental differences among 201

Hordeum morphological and physiological selection using heritability, correlations and selection response 135
Maize at low temperatures (book review) 317
Phaseolus vulgaris cultivar and *Rhizobium* strain variation in acid-pH tolerance and nodulation 91
Plant breeding reviews (book review) 315
Potato in the hot tropics. VI. Population effects on soil temperature development and yield 183
Potato in an isohyperthermic environment
II. Response to planting date.
III. Evaluation of clones 167
Rice drought tolerance, screening technique for evaluating 123
Soybean genetic variability and component analysis, effect of cropping system 103
Soybean response to gibberellic acid. I. Time of application relative to emergence 113
Soybean of varying maturities, intercropping with cassava 211
Triticum genotypic differences in relation to absorbed solar radiation 285
Vigna spp.
Intercropping *Manihot* with maize or cowpea 41
Water regime, effects of
Cotton yield response to accumulated heat units and soil water 253
Deepwater rice, factors affecting 263
Irrigated wheat, model of stripe rust infection and control 51
Drought tolerance, screening technique for evaluating rice 123
Water and nitrogen stress interaction on biomass accumulation, nitrogen uptake, and seed yield of maize 297
Water, nitrogen and wheat growth (book review) 313
Wheat, *see Triticum* spp.
Yams, *see Dioscorea* spp.
Zea spp.
Intercropping *Manihot* with maize or cowpea 41
Maize at low temperatures (book review) 317
Nitrogen and water stress interaction on biomass accumulation, nitrogen uptake, and seed yield of maize 297